Bianco Research L.L.C.

An Arbor Research & Trading Affiliated Company

Independent · Objective · Original

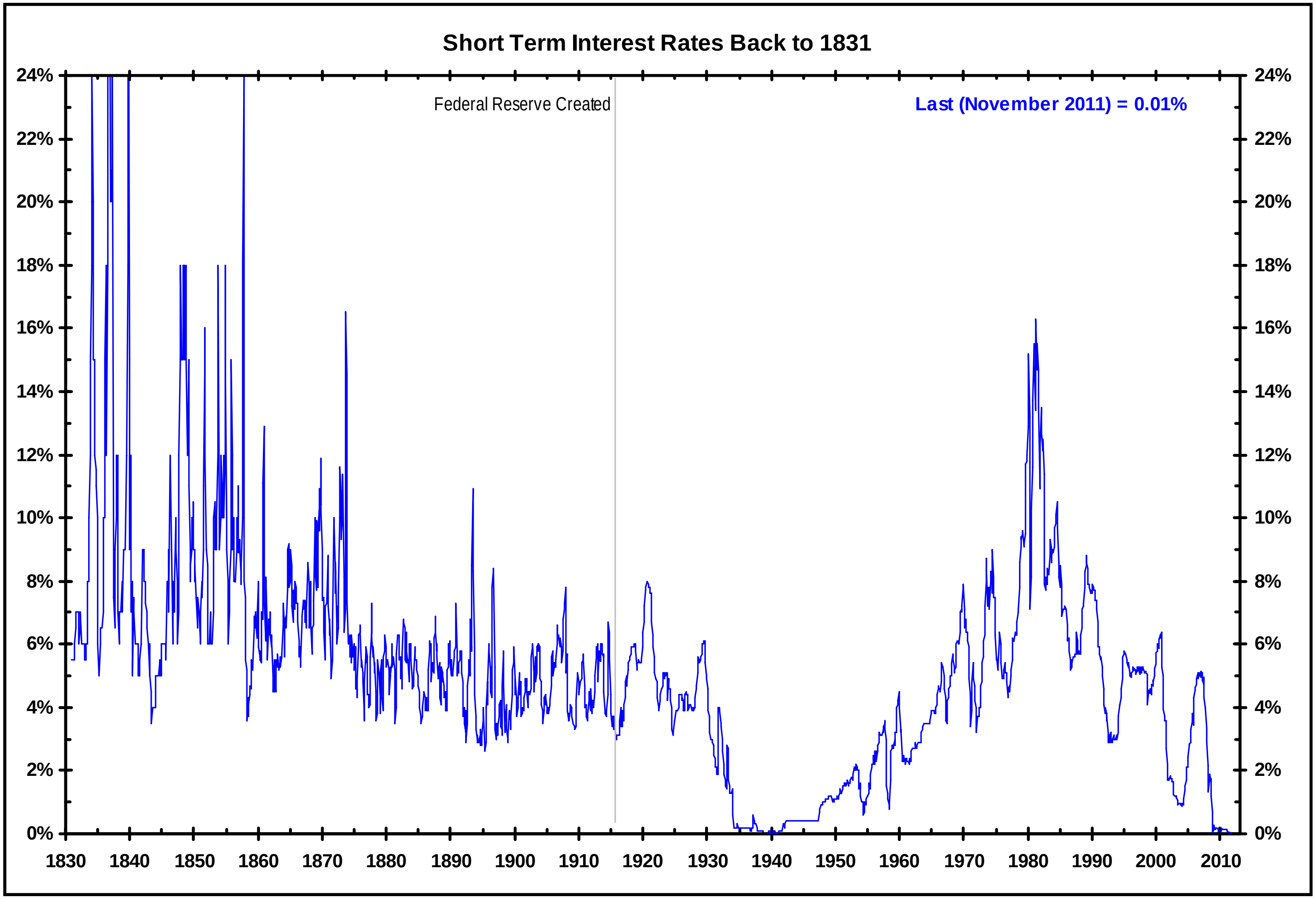
What Drives The Bond Market?

Chicago CFA Handout

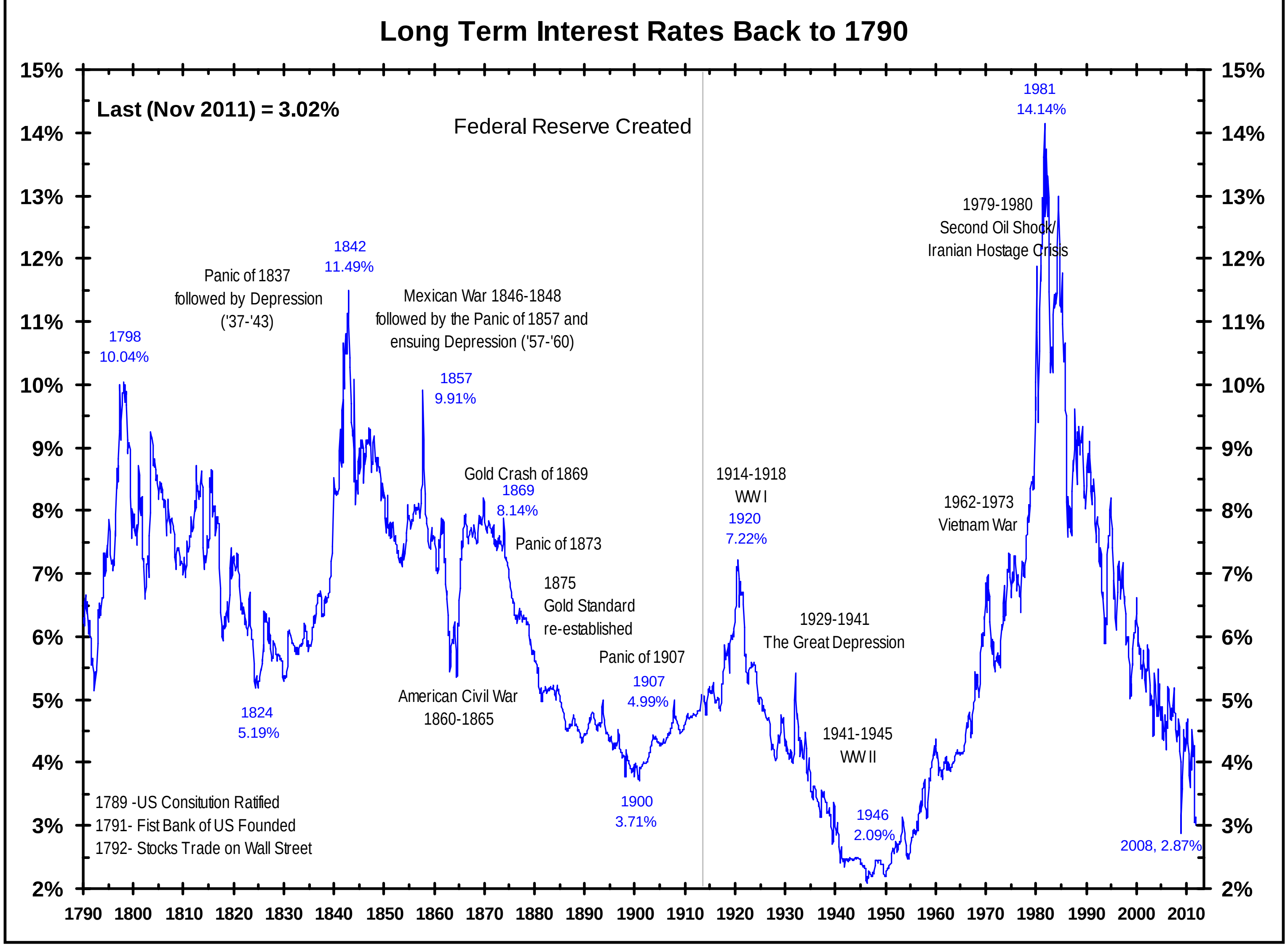
January 18, 2011

Long-Term Interest Rates - 1900 to 2011

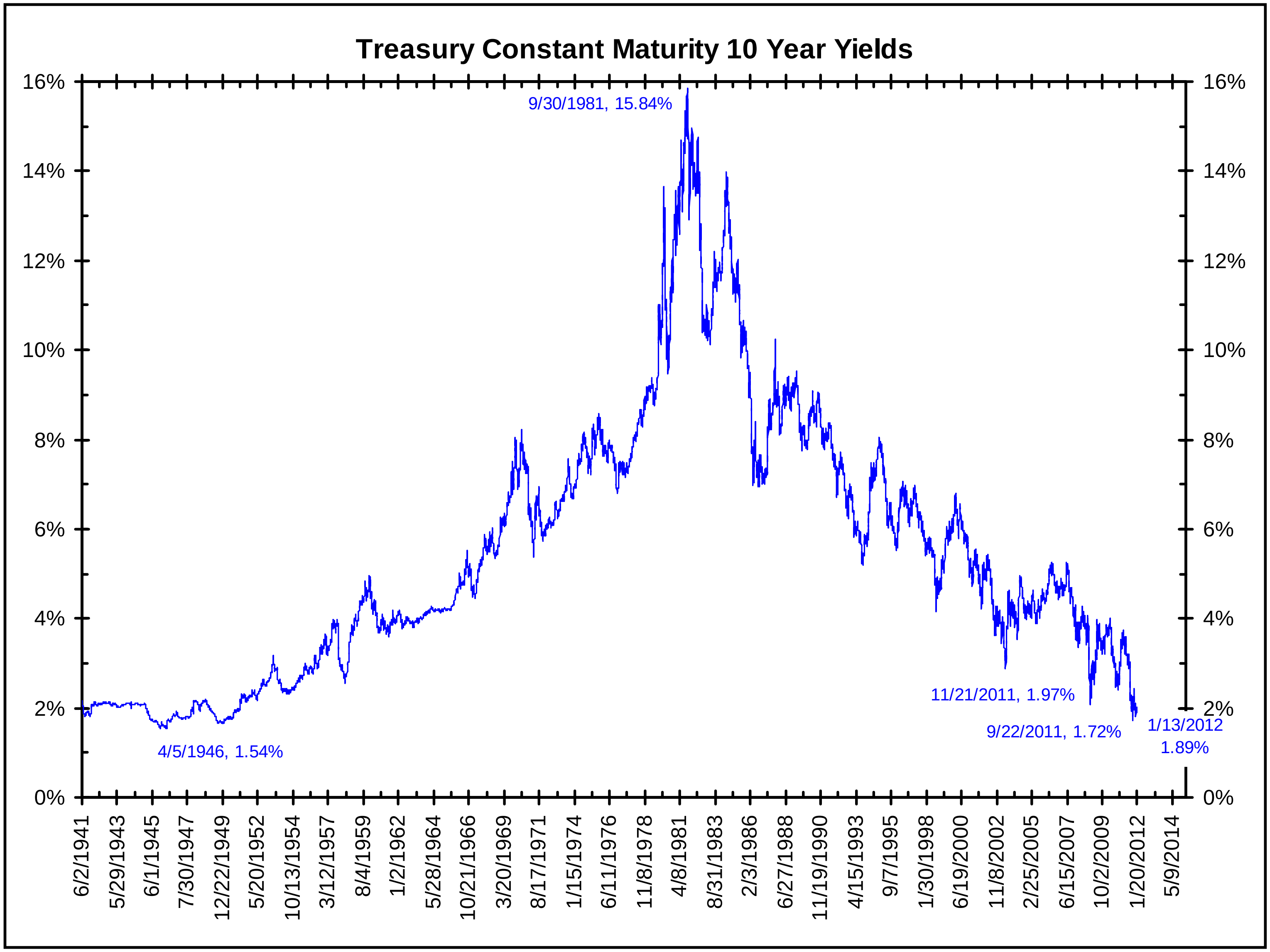
181 Years Of Short-Term Interest Rates



222 Years Of Long-Term Interest Rates



71 Years Of 10-Year Yields



Do They Even Know Bonds Beat Stocks?

In our latest Total Return Review, we said:

However, as the next table shows, this trend has drastically changed in the wake of the financial crisis. Bonds have completely dominated stocks over every tenor from one-month to 30 years. According to Dr. Siegel's book, this has not happened in hundreds of years and was never supposed to happen.

Bonds Beat Stocks At All Tenors

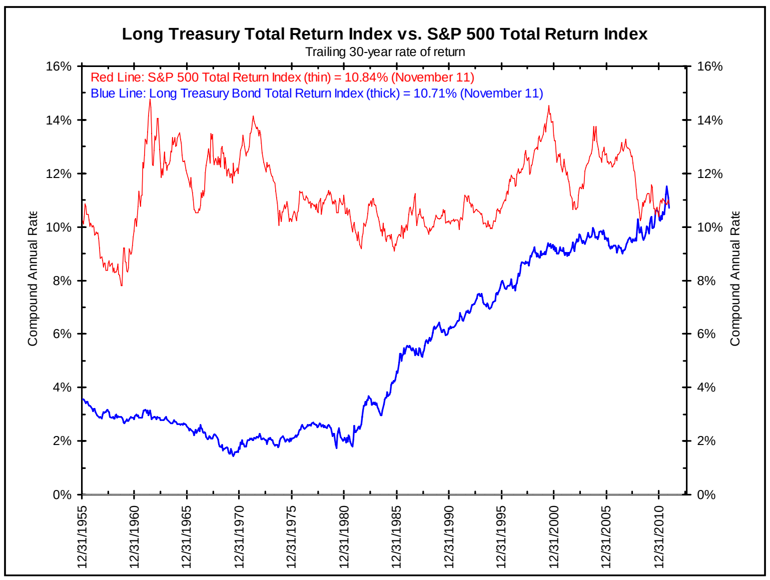
	As of 9/30/11			Annualized Ending 9/30/11					
	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years
30 Year	13.46%	30.96%	32.97%	19.88%	12.08%	10.13%	8.45%	9.16%	11.50%
S&P 500 (Capitalization Weighted)	-7.02%	-13.87%	-8.69%	1.13%	1.23%	-1.18%	2.81%	7.64%	10.81%
30 Year Less S&P 500	20.48%	44.82%	41.66%	18.74%	10.85%	11.31%	5.64%	1.52%	0.69%

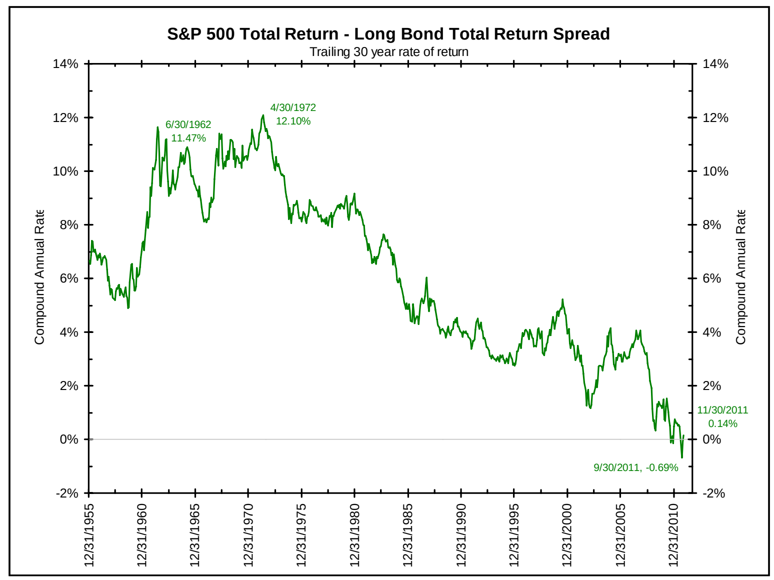
Bonds Beat Stocks At Most Tenors

	As of 12/31/11			Annualized Ending 12/31/11					
	MTD	QTD	YTD	1 Year	3 Years	5 Years	10 Years	20 Years	30 Years
30 Year	3.65%	1.90%	35.50%	35.50%	2.91%	11.17%	8.83%	8.09%	10.55%
S&P 500 (Capitalization Weighted) 3	1.02%	11.80%	2.11%	2.11%	14.11%	-0.25%	2.92%	7.80%	10.94%
30 Year Less S&P 500	2.63%	-9.90%	33.39%	33.39%	-11.21%	11.42%	5.91%	0.29%	-0.39%

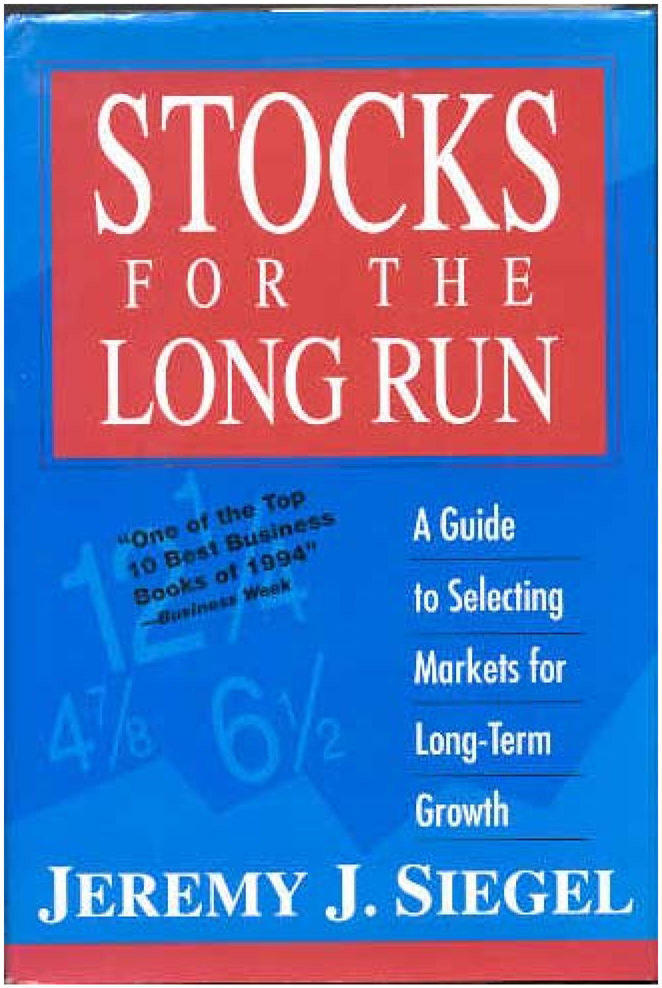
Back in November 2010 we noted that bonds had outperformed stocks over the previous 30-year period for the first time since the 19th century. At that time, the outperformance was only a few basis points. Now, thanks to the calendar quirk of bond yields peaking on the last day of the third quarter in 1981, the 30-year total return of bonds has topped stock's 30-year total return by 69 basis points (10.81% versus 11.50%).

We have called the generation outperformance of bonds over stocks the biggest investment theme everyone has gotten wrong. Over the years, when we note this, many say this is the most bullish argument they have ever heard for stocks. However, as the table above highlights, this argument has been made for years and been wrong for years. Why?





Stocks Always Beat Bonds, Until Now



The first edition was published in 1994, or 18 years ago. One of the conclusions was, over the long run, stocks have always outperformed bonds (long-term Treasuries) over every period analyzed since 1802. So, over long periods of time stocks are less risky than bonds.

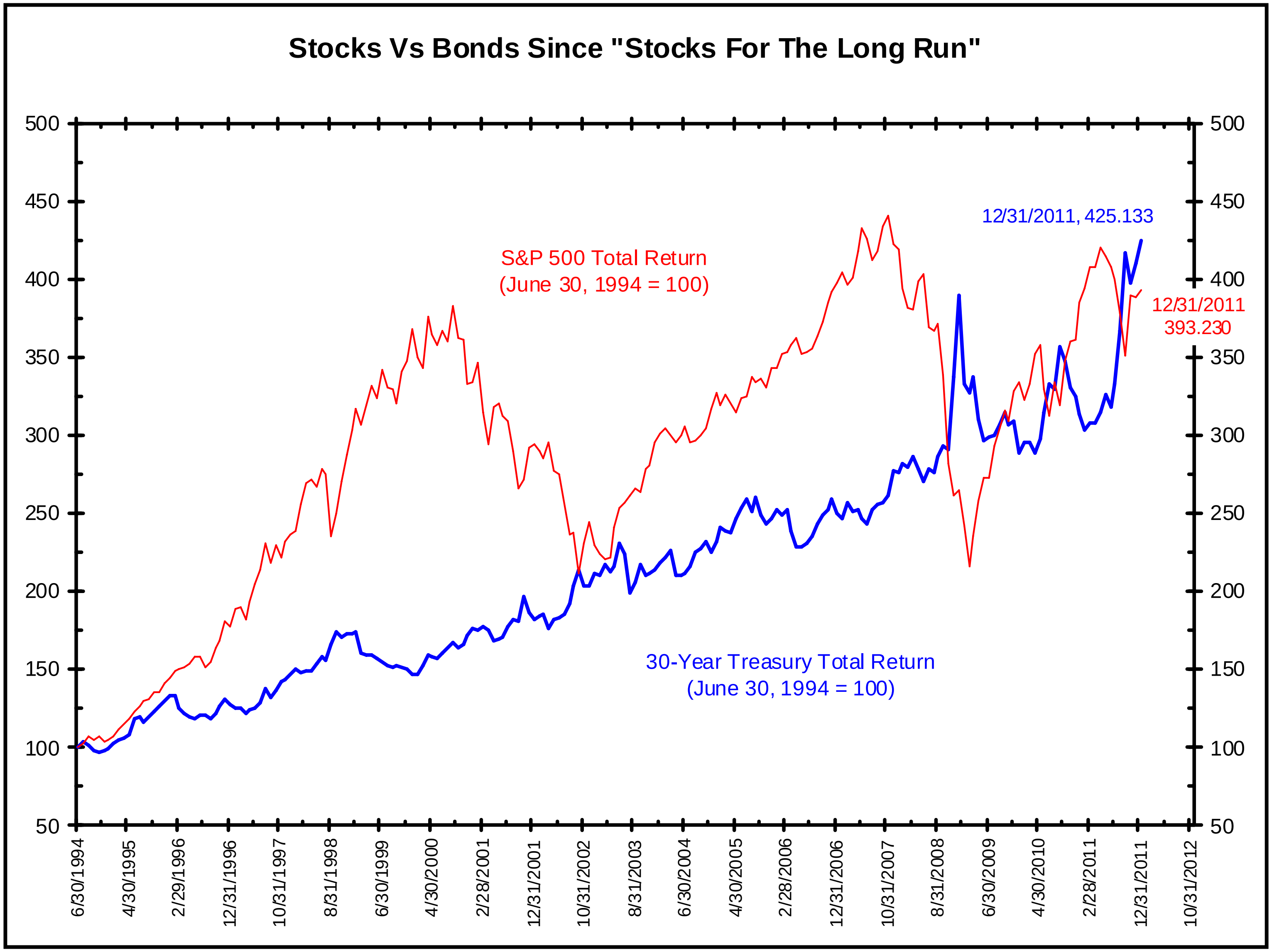
TABLE 2–1

Holding Period Comparisons: Percentage of Periods When Stocks Outperform Bonds and Bills

Holding Period	Time Period	Stocks Outperform Bonds	Stocks Outperform T-Bills
1 Year	1802-2006	61.0	62.0
	1871-2006	60.3	64.7
2 Year	1802-2006	65.2	65.7
	1871-2006	65.4	69.9
3 Year	1802-2006	67.2	70.2
	1871-2006	68.7	73.3
5 Year	1802-2006	69.2	72.6
	1871-2006	71.3	75.0
10 Year	1802-2006	80.1	80.6
	1871-2006	82.4	85.3
20 Year	1802-2006	91.9	94.6
	1871-2006	95.6	99.3
30 Year	1802-2006	99.4	97.2
	1871-2006	100.0	100.0

Specifically, the table above shows that stocks have outperformed bonds over 20 years 95.6% of the time since 1871 and 91.23% of the time since 1802. The only time stocks underperformed bonds over any 20-year period since 1871 was in the aftermath of the Great Depression in the early 1940s. That is, until now.

The Siegel Track Record



Dissin' Bonds

Bloomberg.com – (October 18, 2011) Cooperman 'Wouldn't Be Caught Dead' Owning U.S. Treasuries

Leon Cooperman, the chairman of hedge fund Omega Advisors Inc., said investors should avoid Treasuries after yields dropped to record lows. Rates on 10-year Treasuries fell to 1.67 percent on Sept. 23. Cooperman said that given tax rates and inflation, he's unwilling to accept the negative real rates investors are effectively getting from the securities. **"I wouldn't be caught dead owning a U.S. government bond,"** he said today during a presentation at the Value Investing Congress in New York. "Not because I have a problem with the credit. I have a problem with paying 35 percent on the 2 percent to Uncle Sam, and then have a 2 to 3 percent rate of inflation," he said. "It's confiscation of my capital. I think I'm too smart to play that game."

Nassim Taleb comment from February 5, 2010:

Nassim Nicholas Taleb, author of "The Black Swan," said "***every single human being" should bet U.S. Treasury bonds will decline***, citing the policies of Federal Reserve Chairman Ben S. Bernanke and the Obama administration. It's "a no brainer" to sell short Treasuries, Taleb, a principal at Universa Investments LP in Santa Monica, California, said at a conference in Moscow today. "Every single human being should have that trade." Taleb said investors should bet on a rise in long-term U.S. Treasury yields

So how has Taleb's "no brainer" call performed? From February 5, 2010 to January 13, 2012:

•S&P 500 total return = 25.88%
•BofA/Merrill 20+ Treasury Index total return = 42.98%

Bloomberg Survey Of Economists

Bearishness Always And Everywhere

Results From **Bloomberg's** Monthly Economist Survey For The 10-Year Treasury Yield

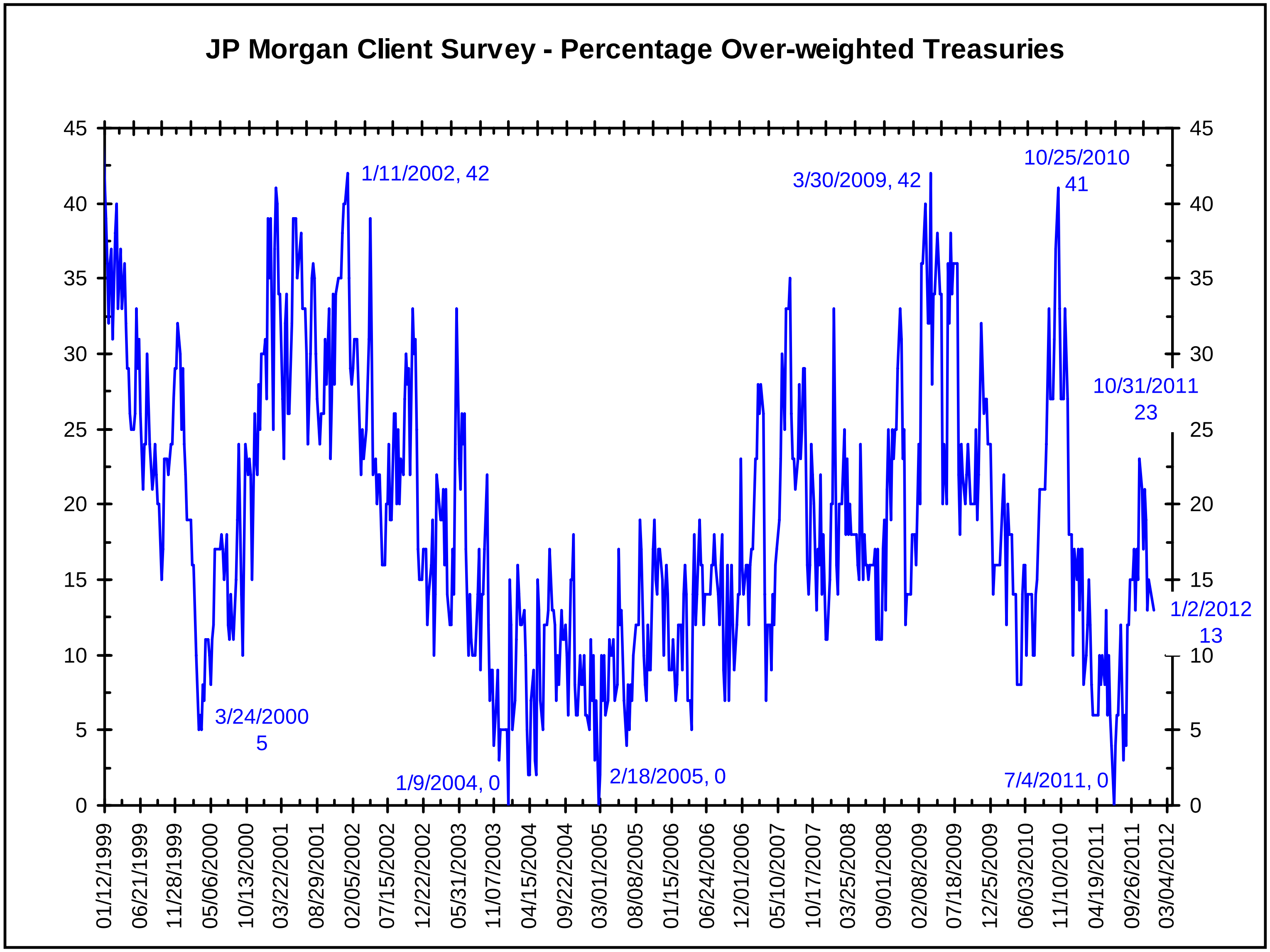
Survey Date	10-Year Yield	Median Forecast 6- Level	Change	Number of Econ. Surveye	% Expecting Higher Rates	Lower Rates	Highest Forecast	Lowest Forecsat	Six Months Later Actual Level	Change	Was The Forecast *Direction*
10-Dec-08	2.68%	3.70%	1.02%	59	97%	3%	4.75%	2.50%	3.86%	1.17%	Yes
13-Jan-09	2.29%	3.10%	0.81%	59	83%	17%	3.80%	1.50%	3.30%	1.01%	Yes
12-Feb-09	2.78%	3.00%	0.22%	55	65%	35%	3.84%	1.70%	3.72%	0.93%	Yes
10-Mar-09	3.00%	3.02%	0.02%	56	50%	45%	3.84%	1.70%	3.35%	0.34%	Yes
9-Apr-09	2.92%	2.99%	0.07%	52	54%	46%	4.00%	2.00%	3.38%	0.46%	Yes
12-May-09	3.17%	3.30%	0.13%	57	63%	35%	4.38%	2.20%	3.47%	0.30%	Yes
10-Jun-09	3.86%	3.73%	-0.13%	60	28%	72%	4.50%	2.23%	3.43%	-0.42%	Yes
10-Jul-09	3.30%	3.95%	0.65%	53	92%	8%	5.00%	3.00%	3.74%	0.44%	Yes
12-Aug-09	3.72%	3.97%	0.25%	49	78%	22%	5.63%	2.75%	3.72%	0.00%	No
11-Sep-09	3.35%	3.88%	0.53%	58	84%	16%	5.00%	2.75%	3.73%	0.38%	Yes
9-Oct-09	3.38%	3.73%	0.35%	62	82%	18%	5.00%	2.50%	3.88%	0.50%	Yes
10-Nov-09	3.47%	3.85%	0.38%	58	88%	12%	4.75%	3.00%	3.52%	0.05%	Yes
9-Dec-09	3.43%	3.70%	0.27%	59	78%	22%	4.75%	2.50%	3.17%	-0.26%	No
14-Jan-10	3.74%	4.00%	0.26%	67	81%	19%	6.25%	3.00%	3.05%	-0.69%	No
11-Feb-10	3.72%	3.97%	0.25%	64	75%	25%	5.20%	2.97%	2.68%	-1.03%	No
11-Mar-10	3.73%	4.00%	0.27%	45	78%	22%	5.00%	2.97%	2.79%	-0.94%	No
9-Apr-10	3.88%	4.24%	0.36%	58	79%	21%	6.00%	3.10%	2.42%	-1.46%	No
11-May-10	3.52%	4.10%	0.58%	71	93%	7%	4.75%	2.75%	2.63%	-0.89%	No
9-Jun-10	3.17%	3.80%	0.63%	60	95%	5%	5.25%	2.75%	3.20%	0.03%	Yes
9-Jul-10	3.05%	3.60%	0.55%	52	87%	13%	4.50%	2.10%	3.30%	0.25%	Yes
11-Aug-10	2.68%	3.30%	0.62%	68	94%	6%	4.50%	2.40%	3.73%	1.05%	Yes
10-Sep-10	2.79%	2.85%	0.06%	59	63%	37%	4.00%	1.75%	3.40%	0.61%	Yes
13-Oct-10	2.42%	2.80%	0.38%	55	82%	18%	3.85%	2.00%	3.57%	1.15%	Yes
10-Nov-10	2.63%	2.78%	0.15%	57	63%	37%	3.75%	2.00%	3.18%	0.55%	Yes
9-Dec-10	3.20%	3.10%	-0.10%	63	25%	75%	5.00%	2.00%	2.96%	-0.24%	Yes
13-Jan-11	3.30%	3.63%	0.33%	71	85%	15%	4.60%	2.35%	3.03%	-0.27%	No
8-Feb-11	3.73%	3.75%	0.02%	59	51%	49%	6.00%	2.78%	2.25%	-1.48%	No
11-Mar-11	3.40%	3.75%	0.35%	63	97%	3%	6.75%	3.00%	1.92%	-1.48%	No
8-Apr-11	3.57%	3.50%	-0.07%	69	84%	16%	4.75%	3.00%	2.21%	-1.36%	Yes
13-May-11	3.18%	3.65%	0.47%	70	99%	1%	4.50%	2.55%	2.05%	-1.13%	No
10-Jun-11	2.96%	3.65%	0.69%	64	97%	3%	5.00%	2.55%	2.06%	-0.90%	No
8-Jul-11	3.03%	3.50%	0.47%	60	97%	3%	4.80%	2.50%	1.90%	-1.13%	No
12-Aug-11	2.25%	2.96%	0.71%	48	98%	2%	3.75%	1.92%	???	???	???
9-Sep-11	1.92%	2.61%	0.69%	62	97%	3%	4.50%	1.64%	???	???	???
12-Oct-11	2.21%	2.40%	0.19%	72	79%	21%	5.00%	1.50%	???	???	???
10-Nov-11	2.05%	2.41%	0.36%	56	93%	7%	3.80%	1.50%	???	???	???
9-Dec-11	2.06%	2.35%	0.29%	66	86%	14%	3.80%	1.50%	???	???	???
11-Jan-12	1.90%	2.34%	0.44%	67	99%	1%	3.35%	1.50%	???	???	???

Always Bearish

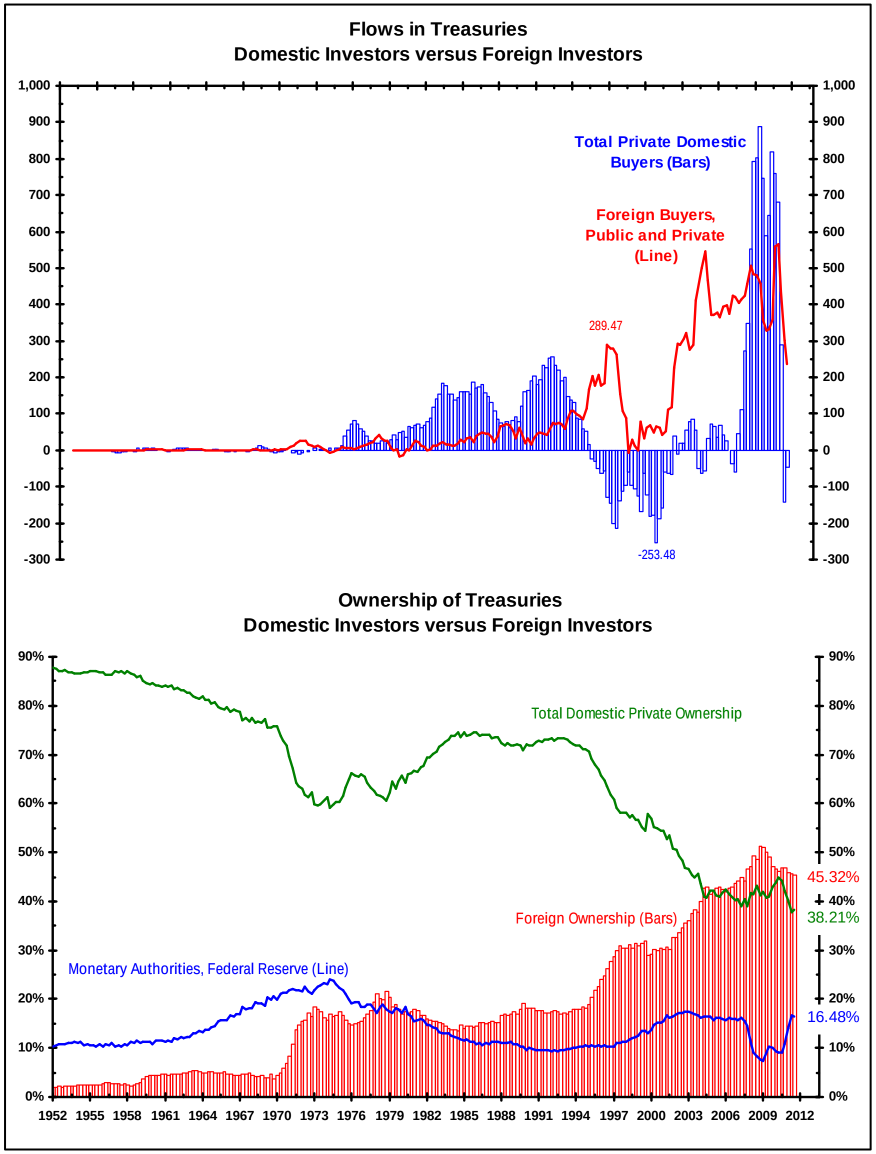
<u>Since The Monthly Bloomberg Survey Began ….</u>

- **107 Monthly Survey Completed (December 2002 to January 2012)**
- **103 (96%) Predicted Higher Rates**
- **4 (4%) Predicted Lower Rates**
- **On Average 79% Were Looking For Higher Rates**
- **42 Surveys (39%) 90%+ Were Looking For Higher Rates**
- **55 Surveys (51%) Were Correct, The Worst Possible Outcome (Coin Toss)**

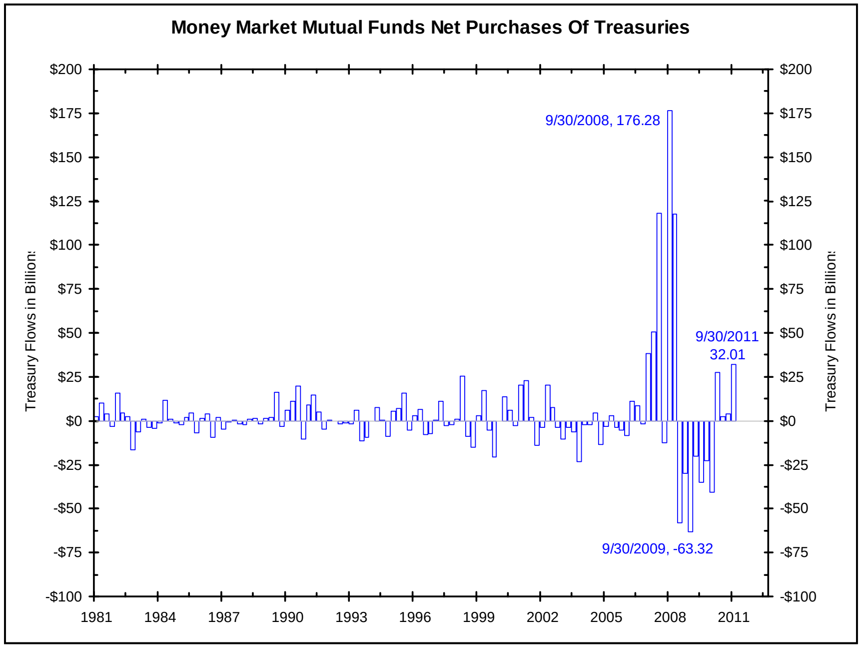
Never More Than 50% Over-Weighting

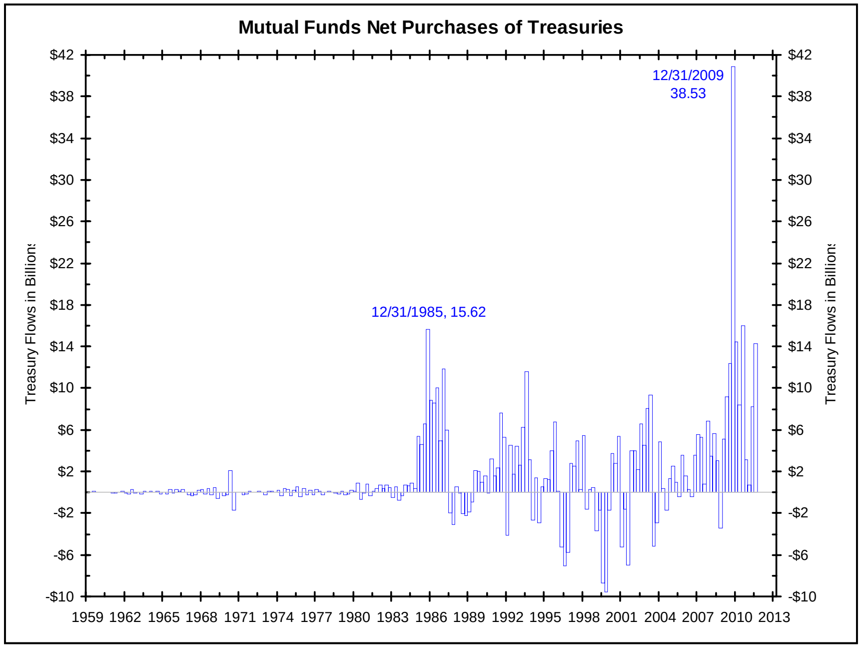


Who Owns Treasuries?

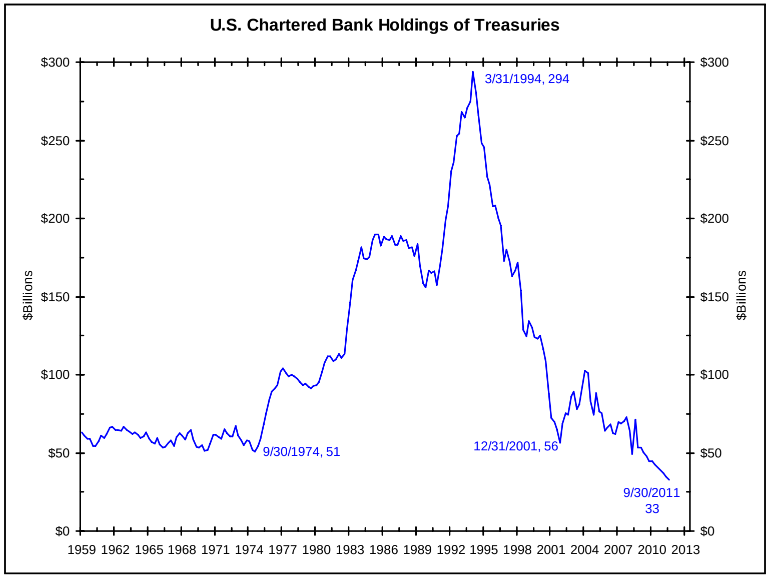


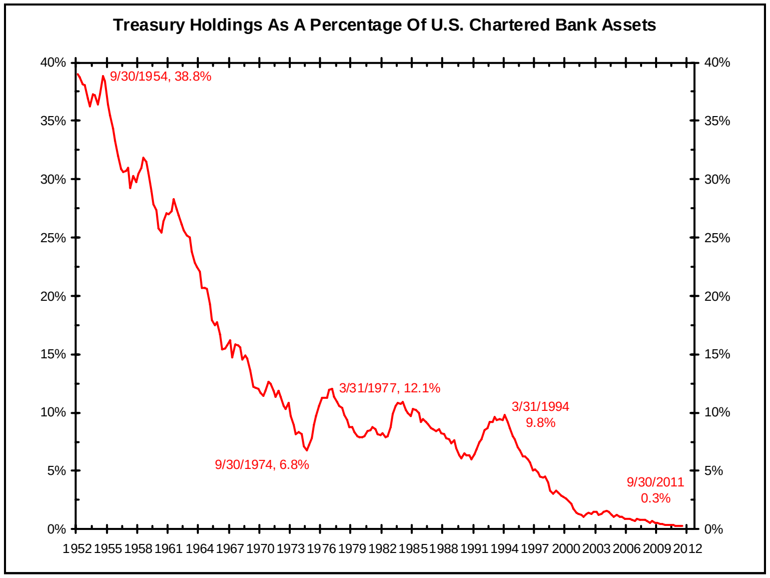
Money Market And Mutual Fund Purchases Of Treasuries



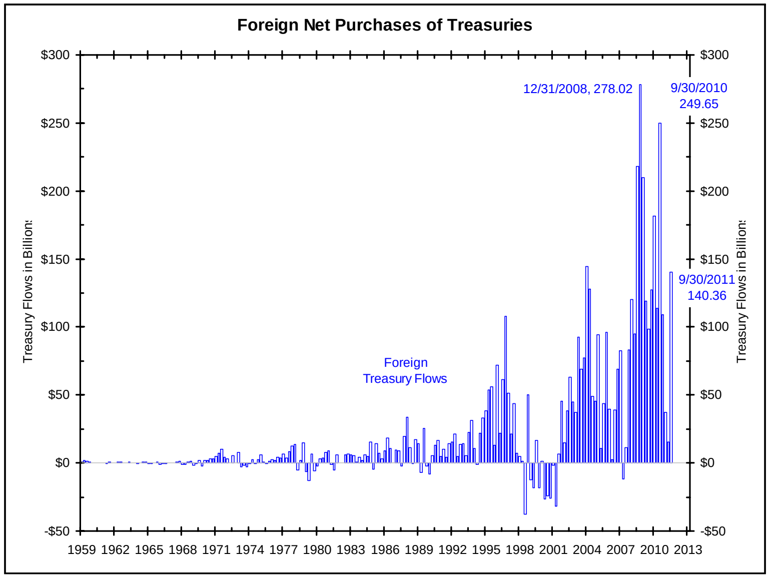


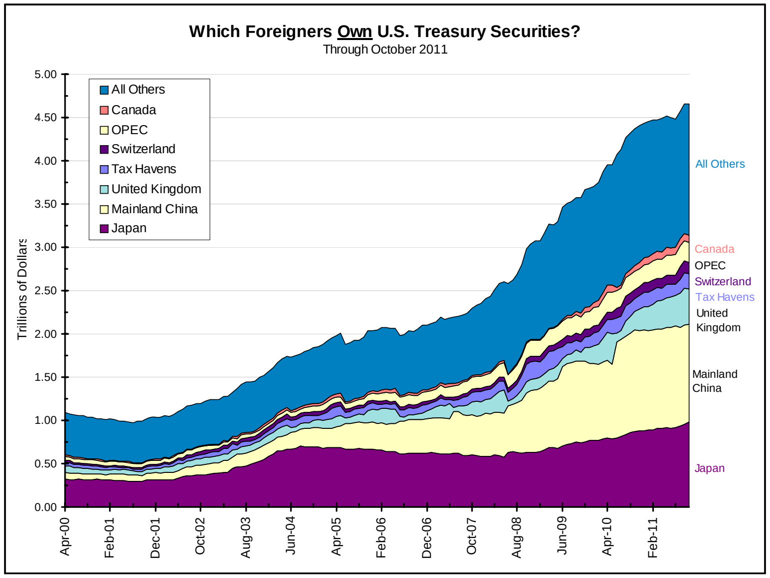
Bank Holdings Of Treasuries

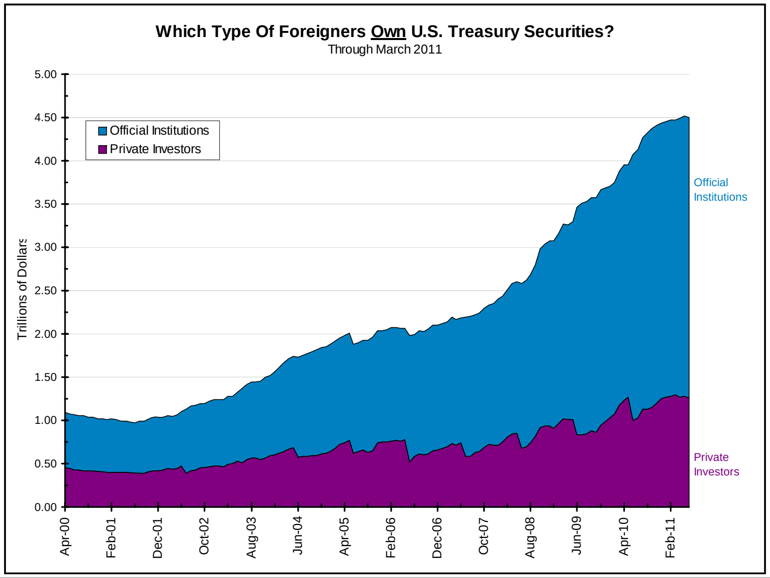




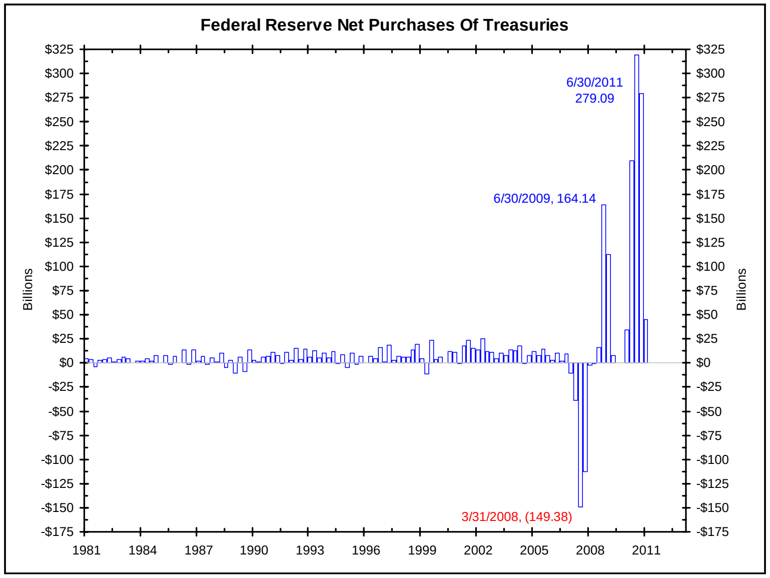
Foreign Ownership Of Treasuries

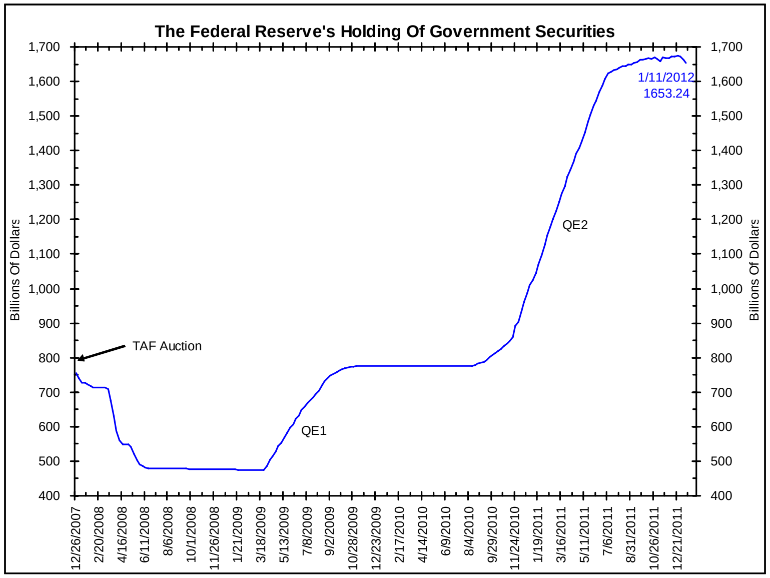




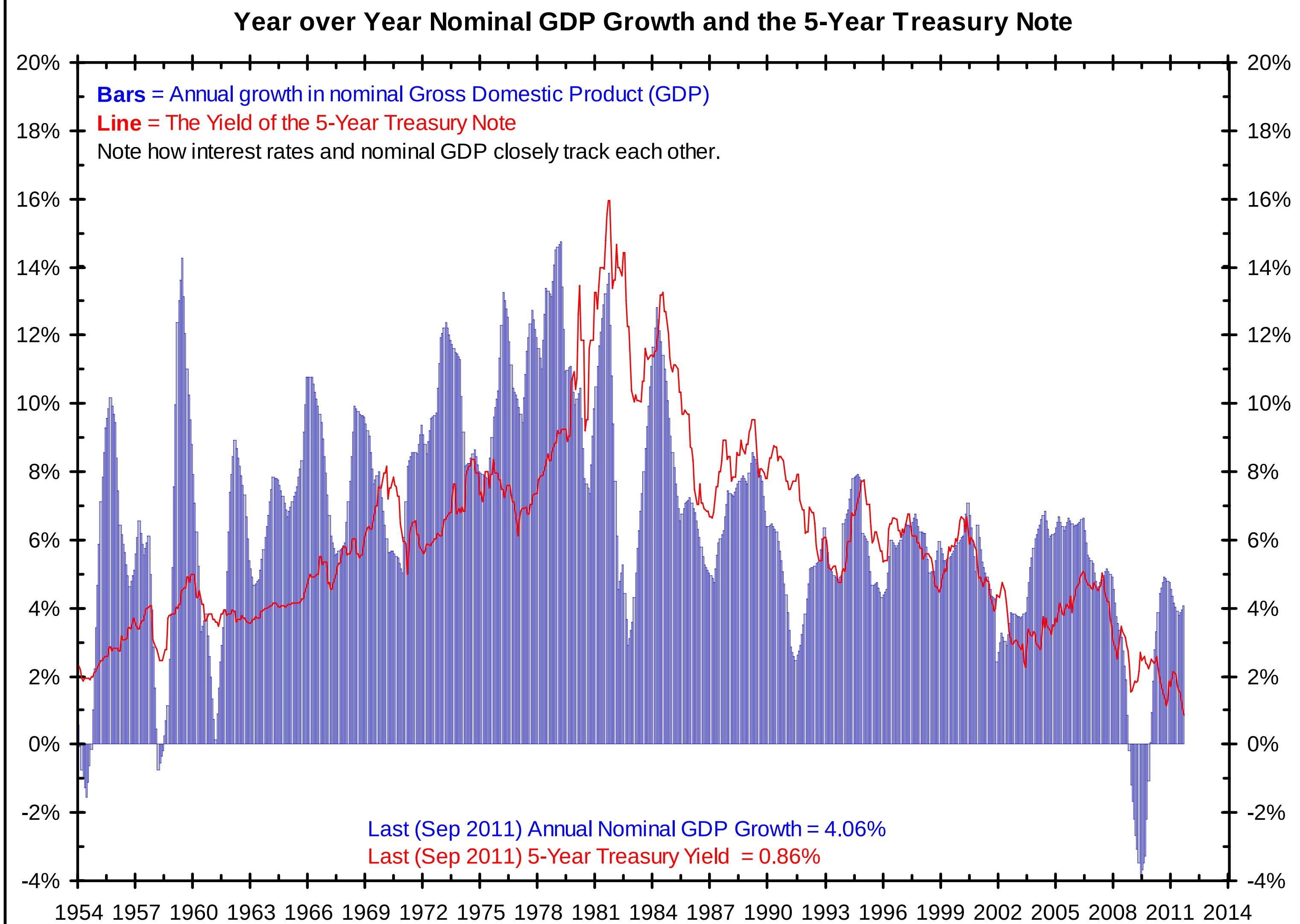


Fed Purchases Of Treasuries





Nominal GDP


Year over Year Nominal GDP Growth and the 5-Year Treasury Note
Bars = Annual growth in nominal Gross Domestic Product (GDP)
Line = The Yield of the 5-Year Treasury Note
Note how interest rates and nominal GDP closely track each other.
Last (Sep 2011) Annual Nominal GDP Growth = 4.06%
Last (Sep 2011) 5-Year Treasury Yield = 0.86%
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
-2%
-4%
1954 1957 1960 1963 1966 1969 1972 1975 1978 1981 1984 1987 1990 1993 1996 1999 2002 2005 2008 2011 2014

Central Bank / Government's 13-Digit Solution

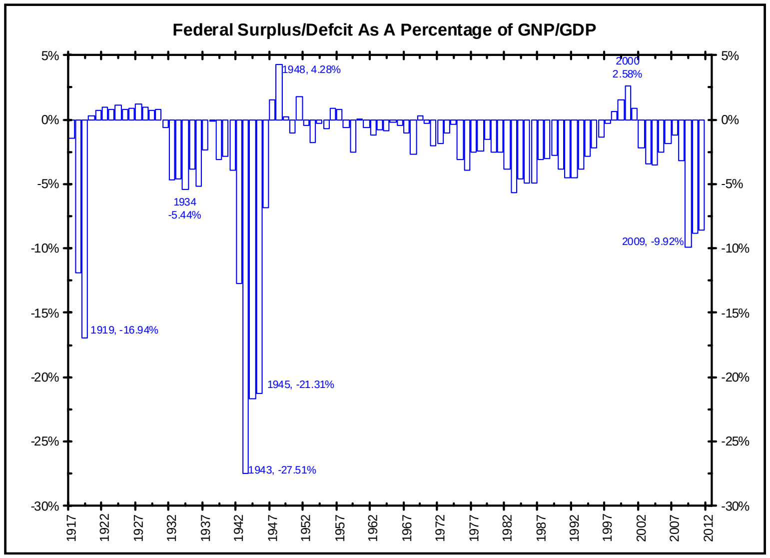
What Government Did - And Didn't Do

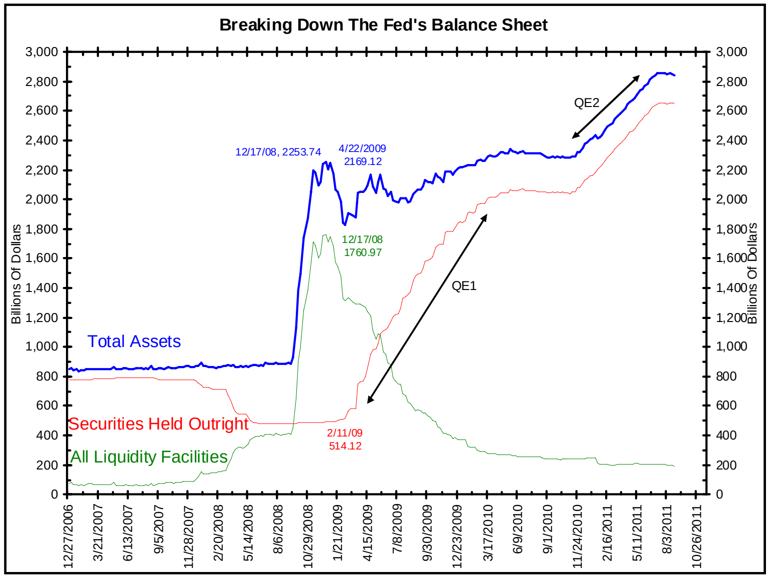
Last 13 Recessions

Peak	Trough	Length	GDP Changed	Stimulus as % of GDP Monetary	Fiscal	Combined
Aug-29	Mar-33	44	-27.0%	3.4%	4.9%	8.3%
May-37	Jun-38	13	-3.4%	0.0%	2.2%	2.2%
Nov-48	Oct-49	11	-1.7%	-2.2%	5.5%	3.3%
Jul-53	May-54	10	-2.7%	0.0%	-1.4%	-1.4%
Aug-57	Apr-58	8	-3.2%	0.0%	3.2%	3.2%
Apr-60	Feb-61	10	-1.0%	0.7%	1.0%	1.7%
Dec-69	Nov-70	11	-0.2%	0.3%	2.4%	2.7%
Nov-73	Mar-75	16	-3.1%	0.9%	3.1%	4.0%
Jan-80	Jul-80	6	-2.2%	0.4%	1.1%	1.5%
Jul-81	Nov-82	16	-2.6%	0.3%	3.5%	3.8%
Jul-90	Mar-91	8	-1.3%	1.0%	1.8%	2.8%
Mar-01	Nov-01	8	-0.2%	1.3%	5.9%	7.2%
Sum/Average		**14**	**n.a.**	**6.1%**	**33.2%**	**39.3%**
Dec-07	**Jun-09**	**18**	**-3.3%**	**18.0%**	**11.9%**	**29.9%**

Source: *Grant's* Interest Rate Observer

Fiscal Balance = The Federal Budget Deficit As A % of GDP
Monetary = Cumulative Change In The Fed's Balance Sheet

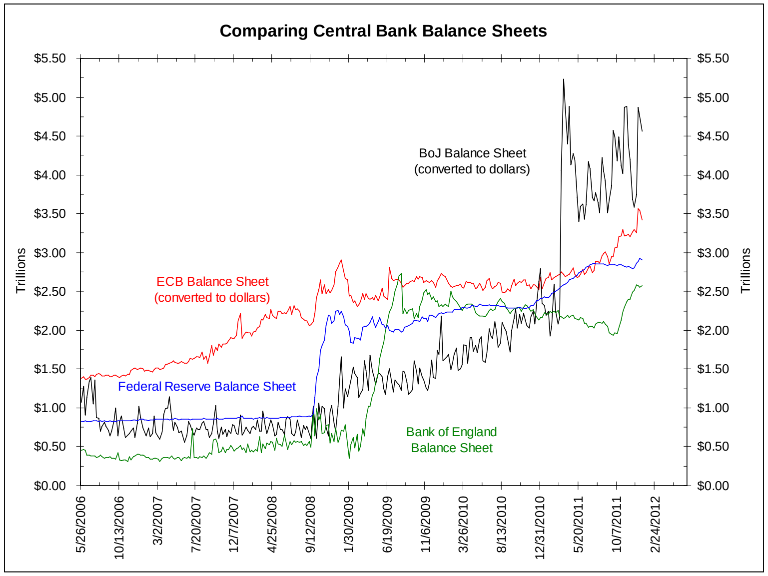


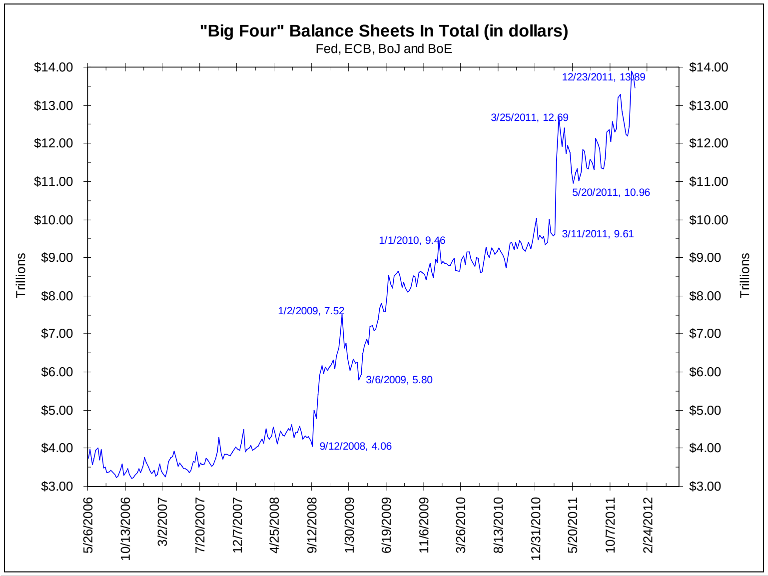


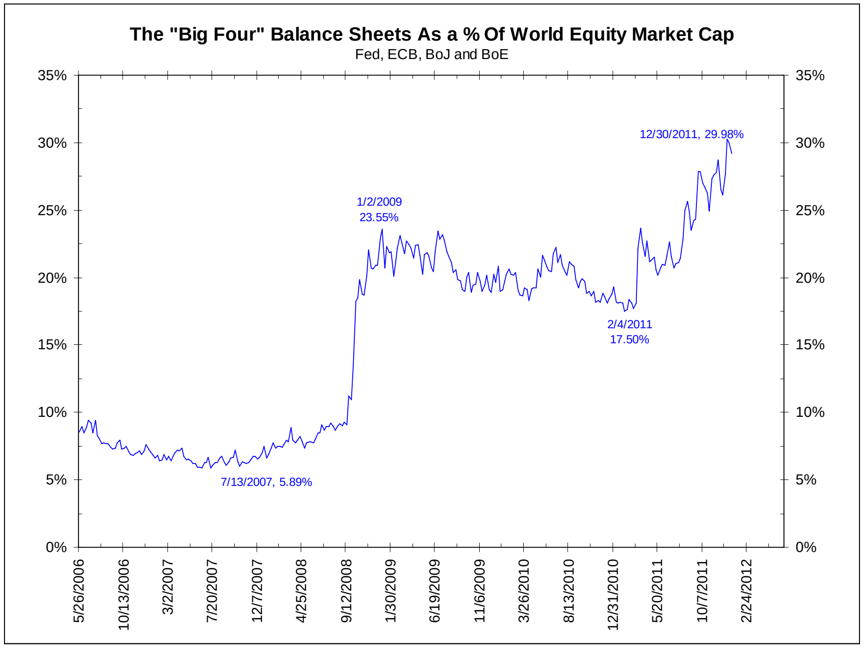
James Grant of *Grant's Interest Rate Observer* calculates that the total fiscal and monetary intervention during the Great Depression (September 1929 to July 1933) was equal to 8.3% of GDP. That was enough to pay for the indelible images in our memories of WPA work camps, FDIC insurance to stop bank runs and Government run soup lines. During the Great Recession (December 2007 to June 2009) Government intervention was 29.9% of GDP, more than three times larger. So whatever you thought the Government did during the Great Depression multiple it by three to get a sense of today's scale.

Simply, the actions of people like Ben Bernanke or Mario Draghi matter far more than any specific fundamental of a company. It's as if every S&P 500 company has the same Chairman of the Board that only knows one strategy, resulting in a high degree of correlation between seemingly unrelated companies. Massive central bank/government involvement in markets risks returning us to a de facto centrally planned economy. Every time the Federal Reserve opens a swap line or the ECB hints at another program to stem the crisis the central banks/governments are trading a short-term fix that raises all boats, even the bad ones, for an even more inefficient capital allocation process.

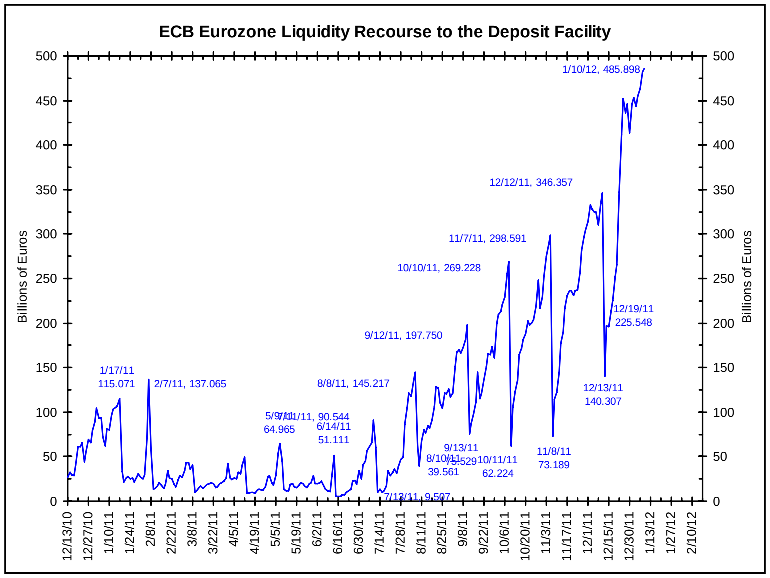
World Central Bank “Money Printing”

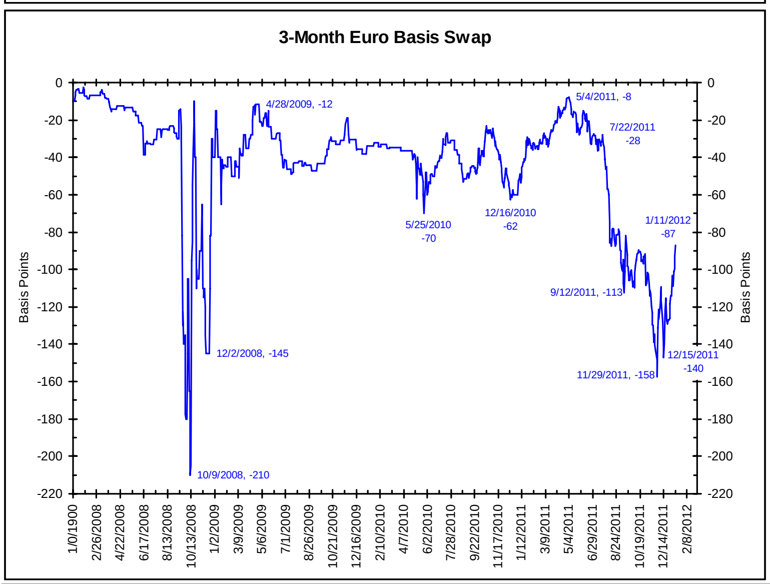






Measuring European "Stress-On/Stress-Off"



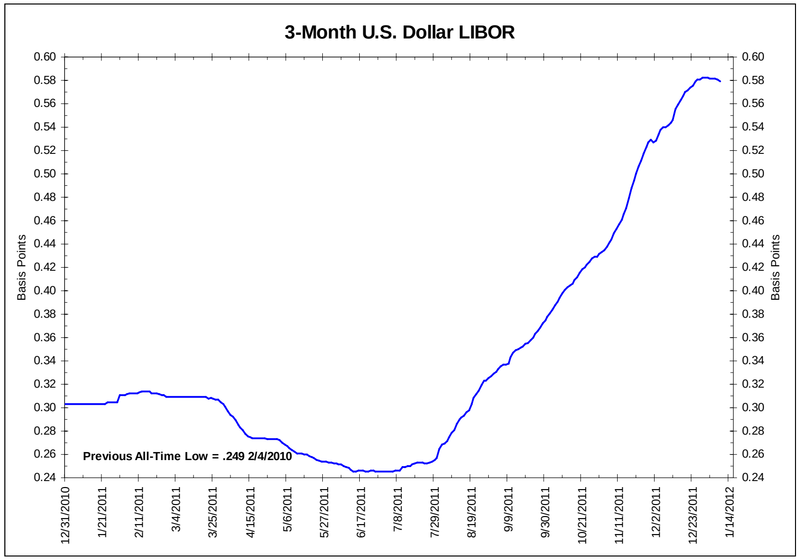


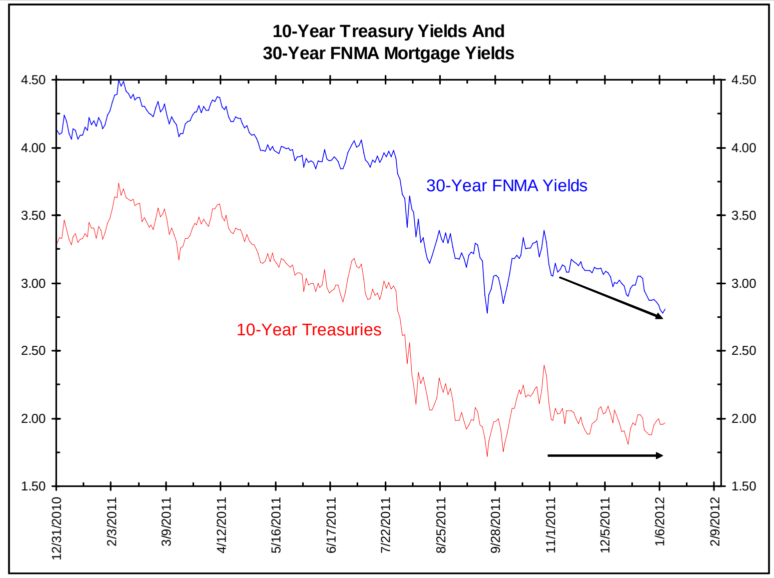
[From Connections 9v10]

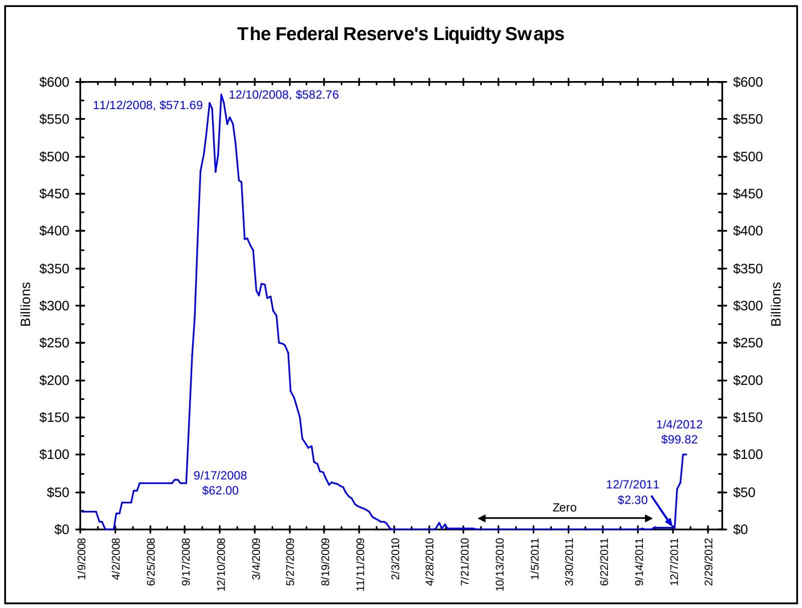
Basis swaps reached their maximum wideness just before the joint central bank announcement. As they lead deposits at the ECB deposit facility by nine days, **we should expect these funds parked on deposit and out of the interbank market to start dwindling**. To the extent European commercial banks deploy these funds, LTRO and otherwise, to buy back their own debt and force existing bondholders into purchasing other risky assets, the combination of swap lines and LTRO will act as a spur to risky assets a la QE2.

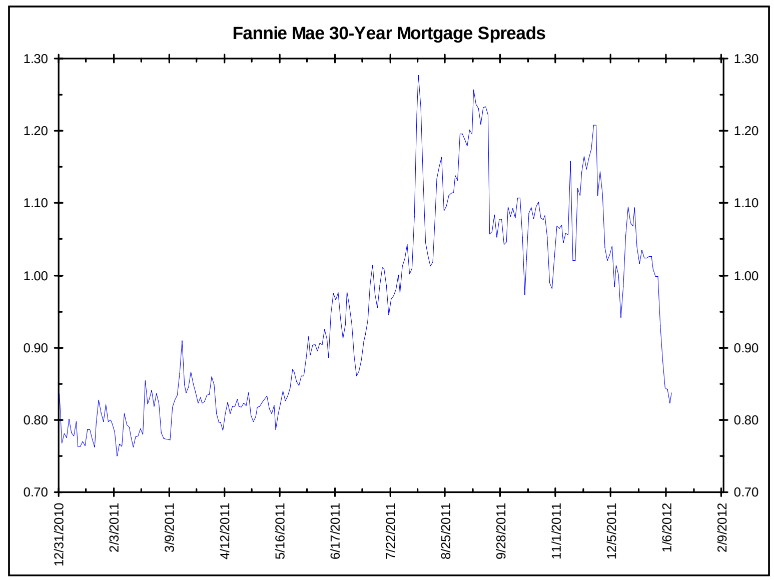
This makes the euro basis swap the key measure of stress-on / stress-off in the European banking system and by extension in global markets. A further and rapid narrowing must be considered bullish. Those who doubt it will find themselves in a reprise of their 2009 error of fighting massive central bank action.

Centrally Planned Markets

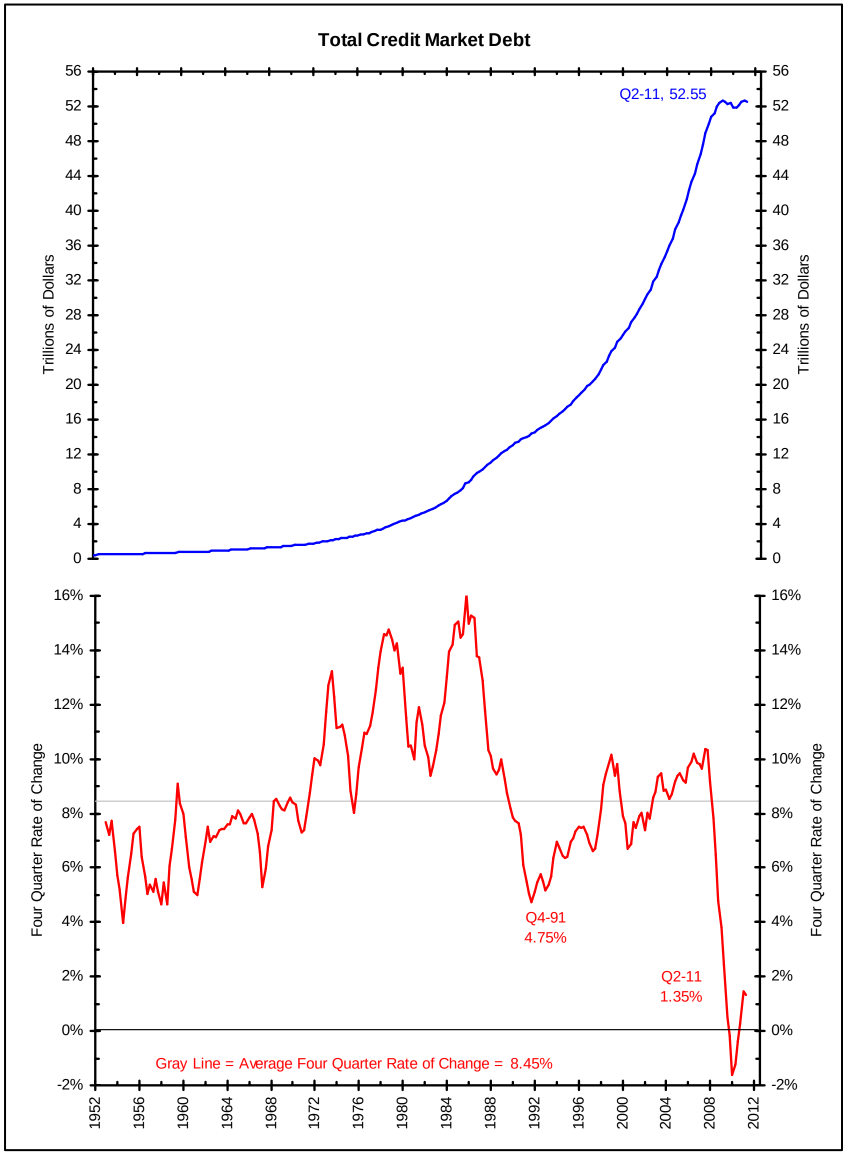




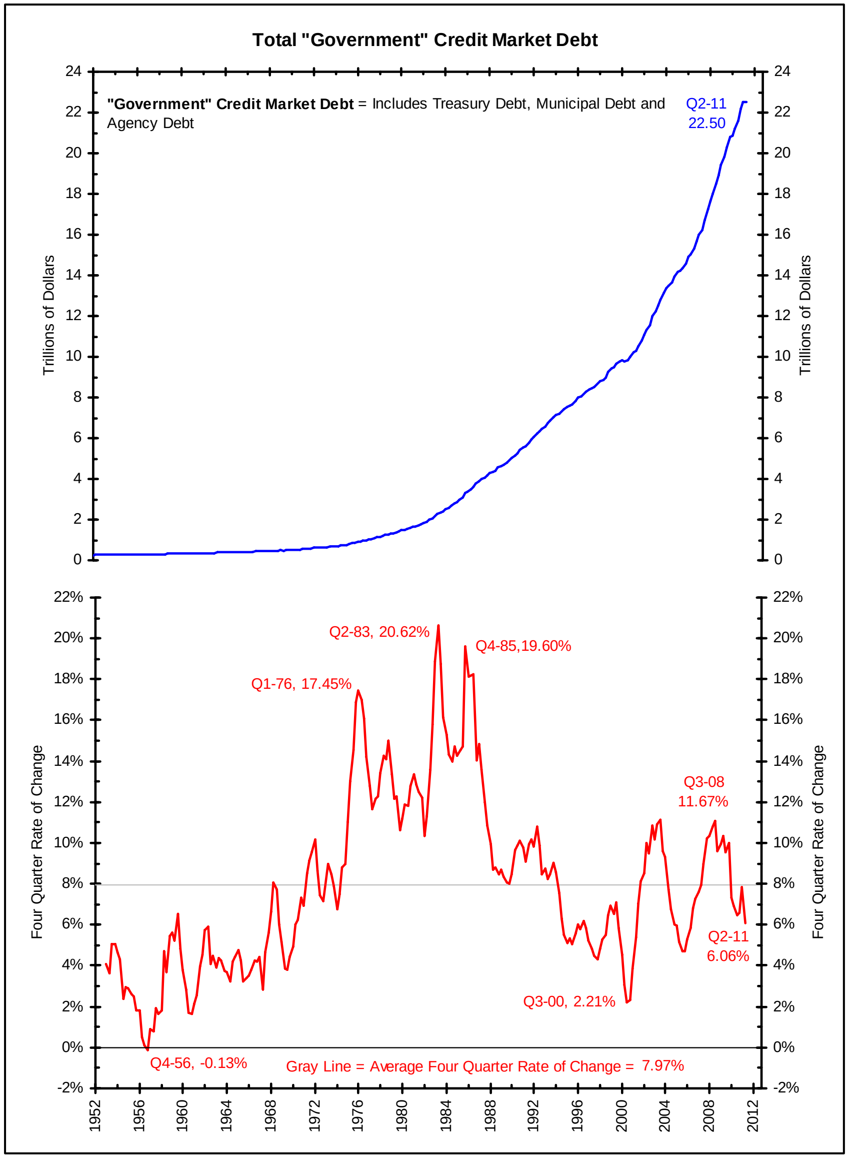


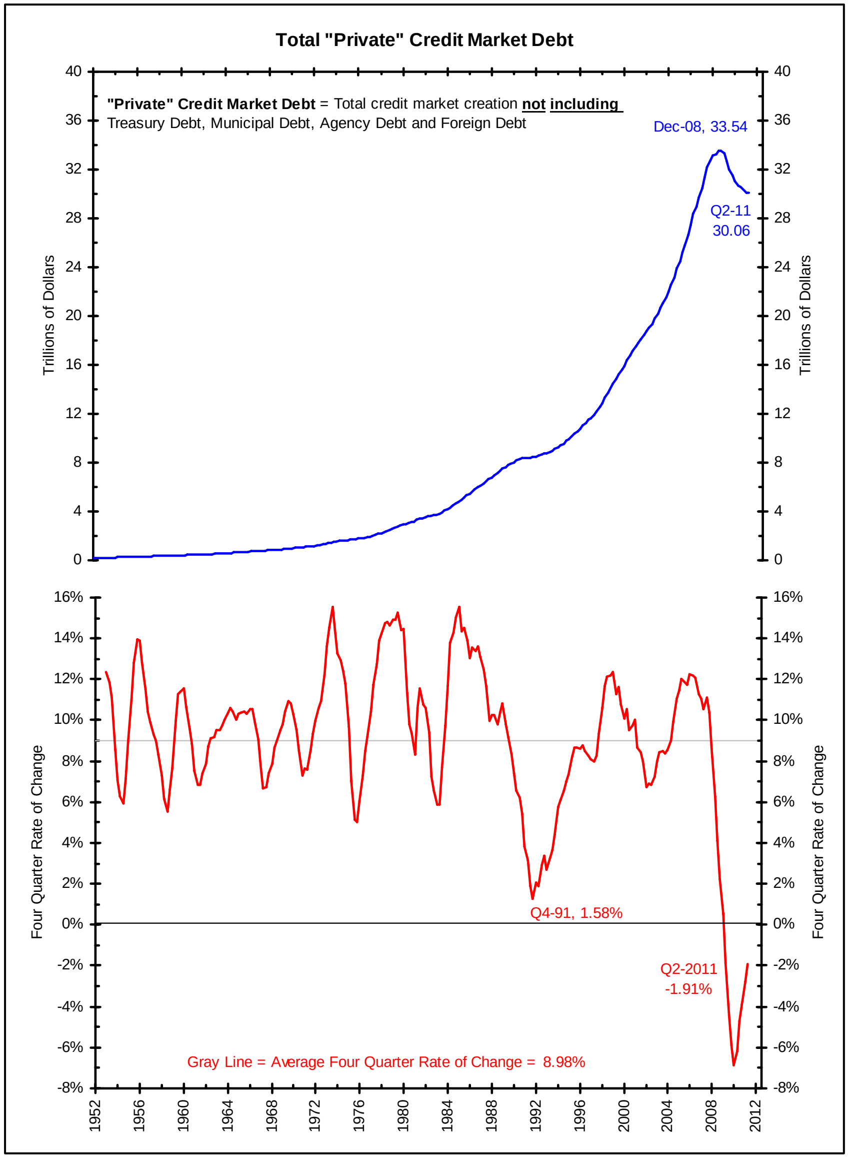


Total Debt Growth Still Depressed

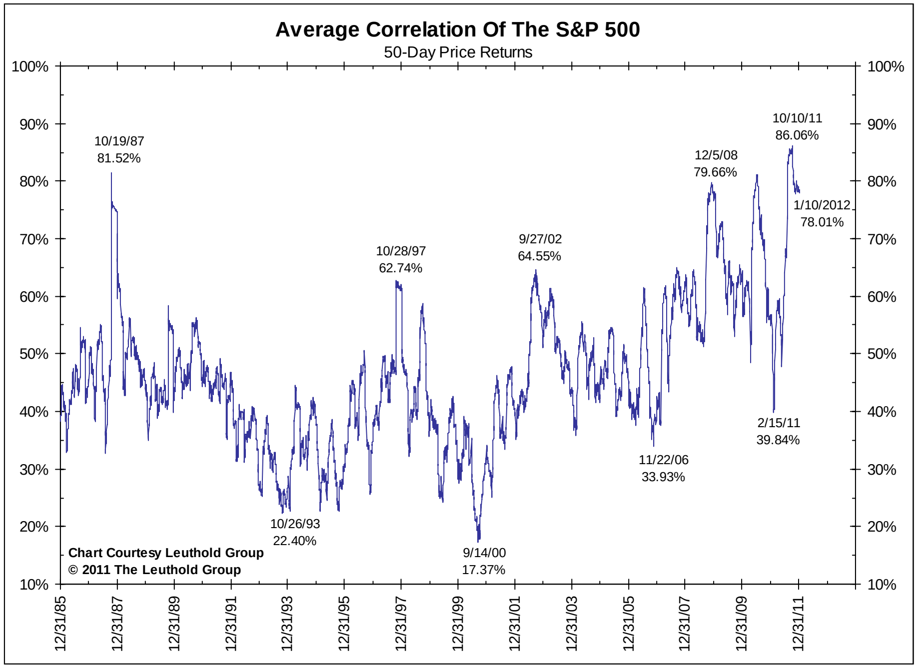


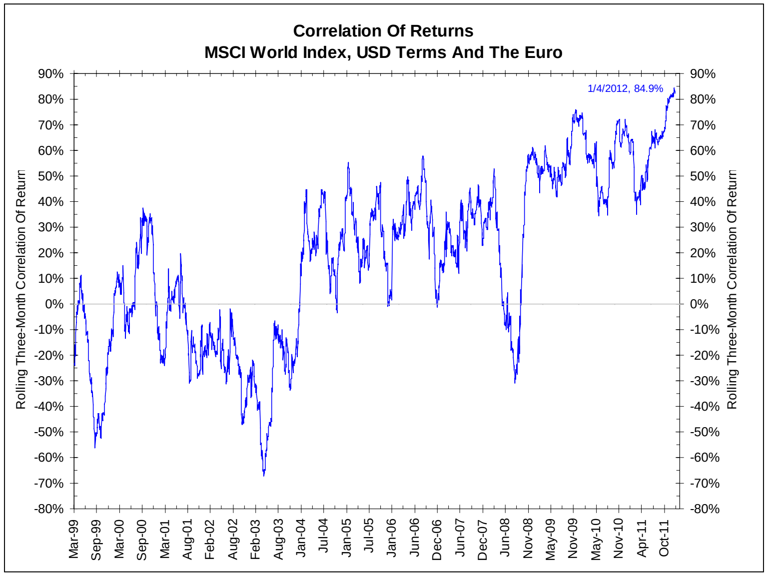
Government And Private Debt Growth

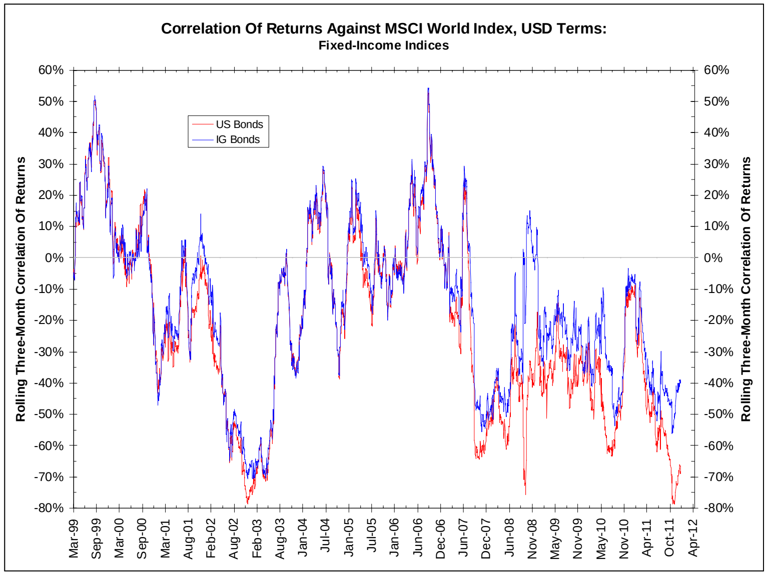




Correlations Are Still High







In 1996 the S&P started trading in decimals.

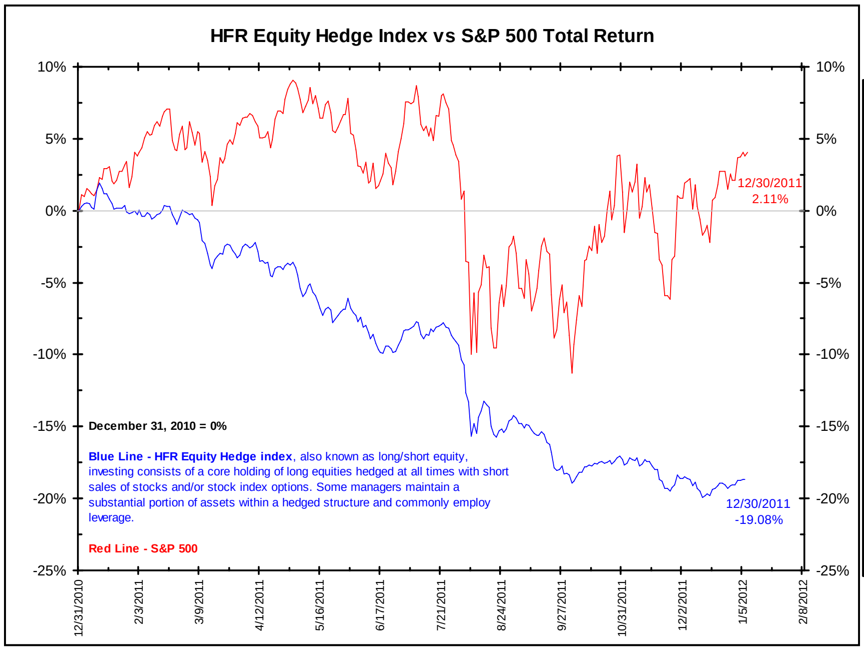
More than 490	**Prior to 2009**	**2010**	**2011**	**Last**
Up Days	2	6	7	12/20/11
Down Days	10	7	8	11/9/2011

(7 of the 10 down days were between Sep 2008 and Mar 2009)

2011 A Disastrous Year For Hedge Fund Managers

Bloomberg.com – Hedge Funds Sit Out Stock Market Rally

Rallying stocks have done little to entice professional money managers back to U.S. equities. A gauge of hedge-fund bullishness measuring the proportion of bets that shares will rise climbed to 44.5 last week from 43.9 at the end of 2011, holding close to the lowest level since 2009, according to International Strategy & Investment Group. Compared with the price of the Standard & Poor's 500 Index, managers' so-called net exposure is close to the lowest since June 2008, the ISI data show. Speculators have been cutting equities since the index peaked in February 2011 at 54.2, concerned Europe's credit crisis will spread and curb global economic growth. They stayed bearish after October when the S&P 500 began a 17 percent rally that has restored $2 trillion to the value of American equities. "Hedge funds have made massive mistakes," George Feiger, chief executive officer of Contango Capital Advisors Inc., the San Francisco-based wealth management arm of Zions Bancorporation, said in a telephone interview on Jan. 6. He manages $3.3 billion at Contango and Western National Trust Co. "We are less and less willing to invest with these people because at the point when you need them the most, they're worth the least."

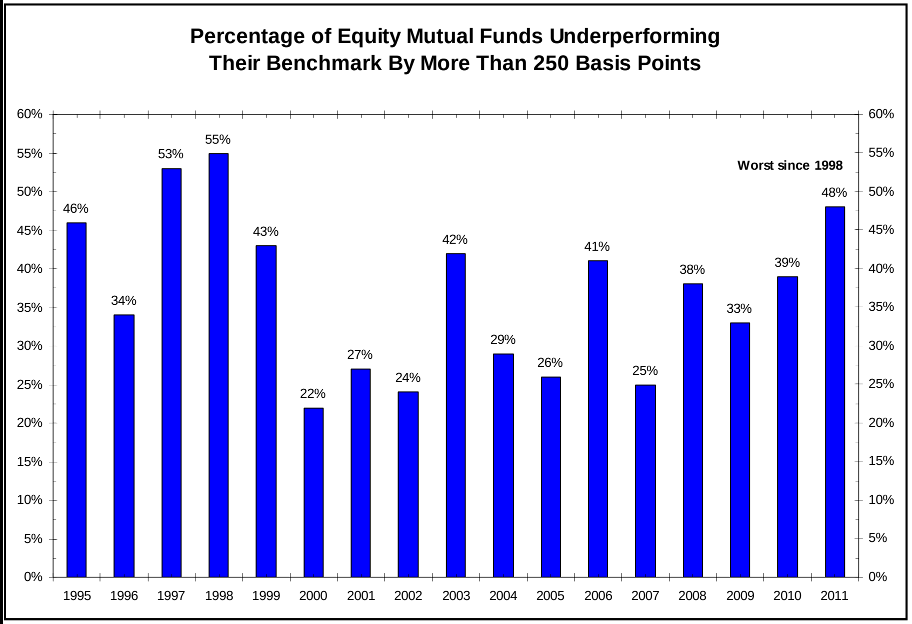


	Equal Weight	HFRI			HFRX		HFRI	HFRX
Year	SPX	Equity Hedge	Difference	SPX	Equity Hedge	Difference	Macro	Macro
1990	-3.11%	14.43%	17.54%	-6.56%	n.a.	n.a.	12.56%	n.a.
1991	35.51%	40.15%	4.64%	26.31%	n.a.	n.a.	46.67%	n.a.
1992	15.63%	21.32%	5.69%	4.46%	n.a.	n.a.	27.17%	n.a.
1993	15.12%	27.94%	12.82%	7.06%	n.a.	n.a.	53.31%	n.a.
1994	0.95%	2.61%	1.65%	-1.54%	n.a.	n.a.	-4.30%	n.a.
1995	32.03%	31.04%	-0.99%	34.11%	n.a.	n.a.	29.32%	n.a.
1996	19.02%	21.75%	2.73%	20.26%	n.a.	n.a.	9.32%	n.a.
1997	29.05%	23.41%	-5.64%	31.01%	n.a.	n.a.	18.82%	n.a.
1998	12.19%	15.98%	3.80%	26.67%	17.14%	-9.53%	6.19%	14.76%
1999	12.03%	44.22%	32.20%	19.53%	41.02%	21.50%	17.62%	25.82%
2000	9.64%	9.09%	-0.55%	-10.14%	16.97%	27.11%	1.97%	12.50%
2001	-0.39%	0.40%	0.79%	-13.04%	8.96%	22.00%	6.87%	8.32%
2002	-18.18%	-4.71%	13.47%	-23.37%	2.12%	25.49%	7.44%	14.04%
2003	40.97%	20.54%	-20.44%	26.38%	14.46%	-11.92%	21.42%	14.61%
2004	16.95%	7.68%	-9.28%	8.99%	2.19%	-6.80%	4.63%	-0.32%
2005	8.06%	10.60%	2.54%	3.00%	4.19%	1.19%	6.79%	6.67%
2006	15.80%	11.71%	-4.09%	13.62%	9.23%	-4.39%	8.15%	5.61%
2007	1.53%	10.48%	8.96%	3.53%	3.21%	-0.32%	11.11%	3.19%
2008	-39.72%	-26.65%	13.07%	-38.49%	-25.45%	13.03%	4.83%	5.61%
2009	46.31%	24.57%	-21.74%	23.45%	13.14%	-10.32%	4.34%	-8.78%
2010	21.91%	10.45%	-11.45%	12.78%	8.92%	-3.86%	8.06%	-1.73%
2011	**-0.11%**	**-8.03%**	**-7.92%**	**2.11%**	**-19.08%**	**-21.19%**	**-3.60%**	**-4.88%**

2011 A Disastrous Year For Mutual Fund Managers

Bloomberg.com – Mutual Funds Trail S&P 500 Index Most Since '97

Equity mutual funds had their worst year since 1997 relative to the Standard & Poor's 500 Index, as record-high correlation and price swings made it harder for money managers to pick stocks. Among about 4,100 funds that invest in large-cap stocks, 17 percent beat the benchmark index for U.S. equities last year, the least since the 12 percent recorded in 1997, based on data from Chicago-based Morningstar Inc. While the S&P 500 finished 2011 virtually unchanged, the year was marked by record high correlation and volatility amid concern over surging sovereign debt in the U.S. and Europe. Funds performed worse than their benchmark gauges as stocks moved in almost lockstep and managers failed to anticipate a rally in utilities and household-product makers, according to Bank of America Corp.



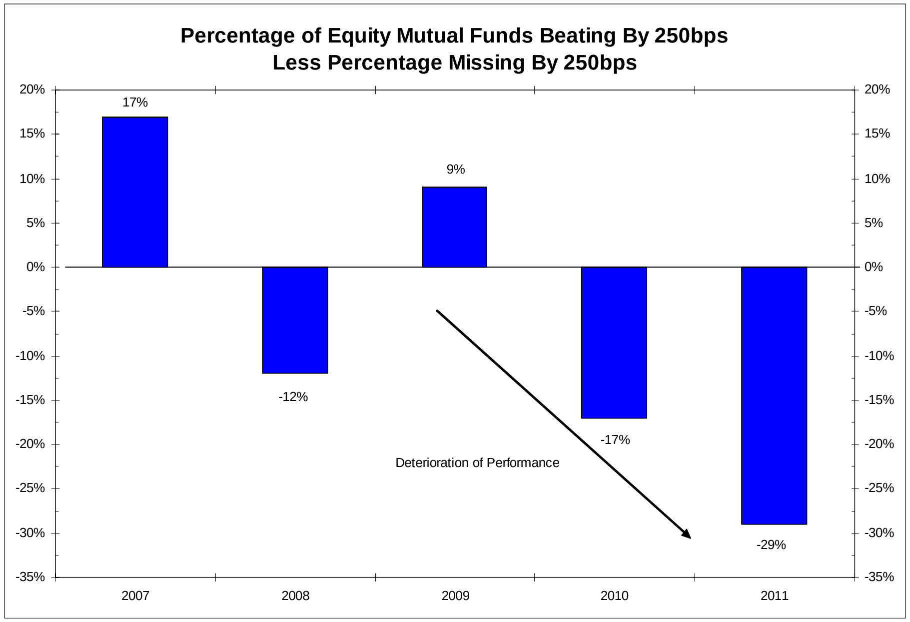
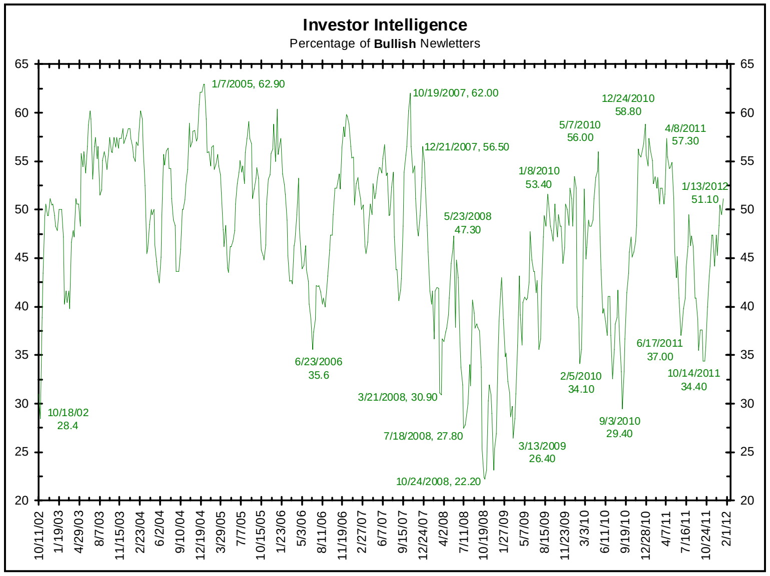
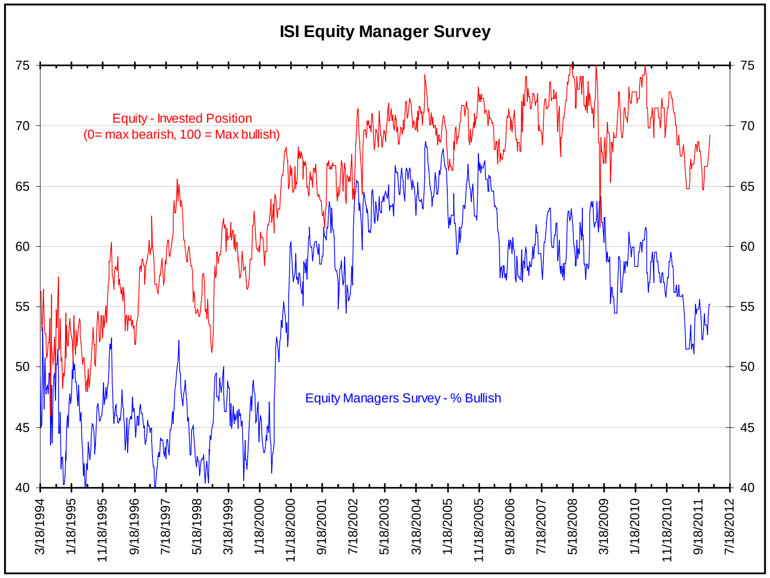


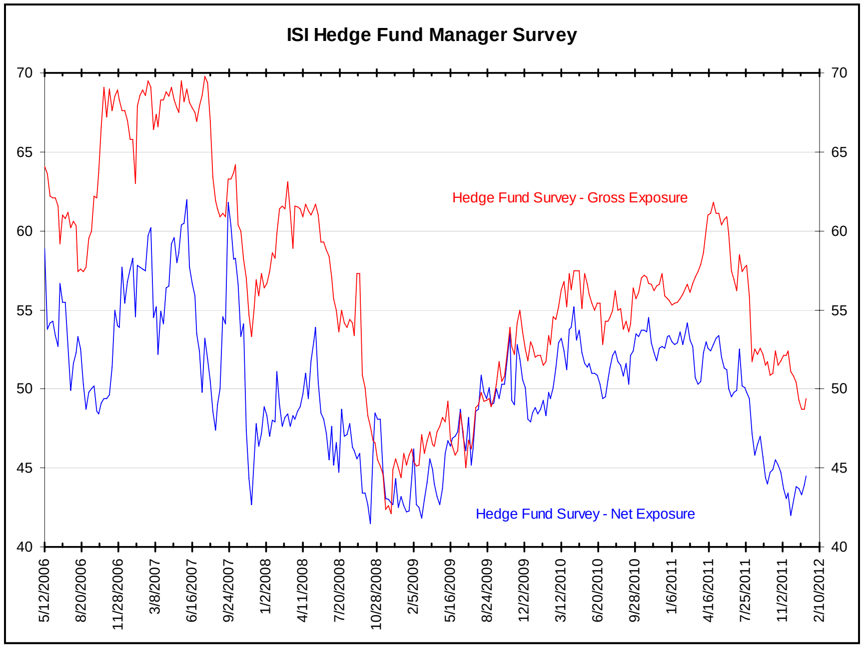
Chart Source: J.P. Morgan

- According to J.P. Morgan, 433 equity mutual funds use the Russell 1000 Growth Index (large cap growth) as their benchmark. Amazingly, 70% underperformed their benchmark by more than 250 basis points while only 3% outperformed. 39% underperformed by more than 500bps. This is one of the worst performances in history

Poor Performance Is NOT The Result Of Bad Market Calls







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